

Table V-6
Trans-Alaska Pipeline System and Future Natural Gas Projects

Name	Estimated Pipeline Length (miles)	Project Description and Route
Active Project		
Trans-Alaska Pipeline (TAPS)	800	TAPS is the key transportation link for all North Slope oil fields. It has been in operation since 1977 and to date has carried nearly 13 billion barrels of oil. Approximately 16.3 square miles are contained in the pipeline corridor that runs between Prudhoe Bay and Valdez. The Dalton Highway (or Haul Road) was constructed parallel to the pipeline between Prudhoe Bay and Fairbanks. The pipeline design capacity is 2 million barrels per day, and it reached near-peak capacity in 1988. Presently, TAPS is running at about 1.0 million barrels per day. The lower operational limit is generally thought to be between 200,000 and 400,000 barrels per day. If oil production from northern Alaska cannot be sustained above this minimum rate, the TAPS system will become nonoperational, and all oil production is likely to be shut in.
Future Natural Gas Projects		
Trans-Alaska Gas System (TAGS)	800	The TAGS plan consists of a gas-conditioning plant on the North Slope; an 800-mile, 42-inch pipeline; a liquefied natural gas (LNG) plant and marine terminal at Valdez; and a fleet of new LNG carriers. LNG would be transported to Japan and other Pacific Rim countries. The Yukon Pacific Corporation has obtained permits for construction of TAGS and export of Alaska North Slope gas to Asia. The LNG facility and marine terminal in Valdez has received the Final EIS prepared by the Federal Energy Regulatory Commission. Yukon Pacific believes the large scale of the project (2.05 billion cubic feet per day to yield 14 million metric tons of LNG annually) will make this project competitive with other new LNG projects. The project is currently stalled by the lack of commitments from the North Slope gas producers, delivery contracts to Asian buyers, and high construction costs.
Alaska Natural Gas Transportation System (ANGTS) ¹	2,102	The ANGTS plan is a pipeline system connecting Alaska North Slope gas production through Canada to the lower 48 states. The new pipeline would run parallel to TAPS from the North Slope to interior Alaska and then cross the Yukon Territory to connect to existing pipelines in Alberta. The primary market would be a consumer in the U.S. Numerous permits, rights-of-way, and approvals have been obtained for the proposed pipeline route through Alaska and Canada. Downward revisions to construction costs and the increase in gas prices to the \$3-\$4 per million-cubic-foot range make this project more appealing today. Currently, several variations to routes are being considered for the overland gas pipeline system.

Table V-6 (continued)
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Name	Estimated Pipeline Length (miles)	Project Description and Route
Arctic Resources, Northern Gas Pipeline Project	326 offshore 874 onshore	The ARC project involves a 52-inch, high-pressure gas pipeline running offshore from Prudhoe Bay in Alaska to the Mackenzie delta in the Northwest Territory and then south through the Mackenzie River Valley to the existing gas pipeline network in northern Alberta. The 326-mile offshore portion would be trenched in 30-60 feet of water. The 874-mile onshore portion would also be buried. It is expected to deliver 2.5 billion cubic feet per day to markets primarily in the U.S. The project would involve a consortium of gas producers, pipeline companies, and Native corporations in both Alaska and Canada. Commitments of gas producers and gas buyers have not yet been obtained nor have right-of-way permits been issued.
Natural Gas to Liquids Conversion ²	Will use existing TAPS Pipeline	Atlantic Richfield Co. (ARCO) and Syntroleum Corp constructed a pilot-scale, natural gas to liquids (GTL) conversion facility in Puget Sound, Washington. More recently, BP-Amoco has begun design work on a GTL pilot project on the Kenai Peninsula in Alaska. As a result of the BP-Amoco-ARCO merger, BP-Amoco now holds an equal interest in the gas reserves in the Prudhoe Bay field. All of the major North Slope gas owners (BP-Amoco, Exxon-Mobil, and Phillips-Alaska) are studying the feasibility of various gas commercialization projects. GTL is an attractive option because it will use the existing TAPS pipeline (extending its life and lowering future tariffs) and produce clean-burning fuels to meet more stringent Environmental Protection Agency emission standards for vehicles. At the present time, the overall cost of a full-scale gas to liquids project is comparable to a similar-sized LNG project. As an emerging technology, new cost-reduction breakthroughs are expected for gas to liquids processing, improving the economic potential for future gas to liquid projects.

Notes:

¹Thomas et al. (1996).

²Alaska Report (1997).